

U. S. Serial No. 10/708,447

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[0031]

[c1]

What is claimed is:

1. A high definition multimedia interface (HDMI) connector comprising:
an insulated housing assembly (10) consisting of an insertion portion (11) and a wiring block (12) adapted to fix a terminal (5) therein by use of a retainer (14) of the insertion portion (11) and a flat block (123) of the wiring block (12);
a metallic housing assembly (20) consisting of a metallic front shell (21) and a metallic rear shell (22) adapted to accommodate the insulated housing assembly (10) in the metallic front shell (21) by means of engagement of a latch slot (211) at the rear end of the metallic front shell (21) and a latch lug (141) on the insertion portion (11) of the insulated housing assembly (10), and further combined with the metallic rear shell (22) by means of engagement of a protrusion (212) on the metallic front shell (21) and a latch hole (221) on the metallic rear shell (22), wherein a slanting inward projection (222) at two sides of the metallic rear shell (22) is thrust against the flange of the metallic front shell (21) to avoid the metallic housing assembly (20) made loose thereof;
a plastic outer shell (30) adapted to secure the assembled insulated housing assembly (10) and metallic housing assembly (20); and
a front cover (40) attached around the rear part of the metallic front shell (21) in flush with the front edge of the metallic rear shell (22) to combine with the plastic outer shell (30) by means of engagement of buckles (41) on the front cover (40) and notches (31) at the front end of the plastic outer shell (30).

[c2]

2. A high definition multimedia interface (HDMI) connector as claimed in claim 1, wherein the insertion portion (11) consists of the insertion front (13) at front part and the retainer (14) at rear part.

[c3]

3. A high definition multimedia interface (HDMI) connector as claimed in claim 2, wherein the insertion front (13) is a flat projecting body, which provides two terminal receptacle slots (131) aligned at its top and bottom side extended throughout the portion from the insertion front (13) at the front part to the retainer (14) at the rear part, and utilizing the curved contour shape at the bottom of both sides of the projecting body to form the retainer.

[c4]

4. A high definition multimedia interface (HDMI) connector as claimed in claim 2, wherein the retainer (14) jointly through connection with the insertion front (13) constitutes a rectangular body having a plurality of latch lug (141) embedded on the top and bottom end, a positioning pole (142) furnished at the end of the rectangular body, and a parallel stop plate (15) having a hollowed stop slot (151) extending at the both sides of the rectangular body.

[c5]

5. A high definition multimedia interface (HDMI) connector as claimed in claim 4, wherein the latch lug (141) is engaged with the latch slot (211) on the metallic front shell (21) to form a retaining means.

[c6]

6. A high definition multimedia interface (HDMI) connector as claimed in claim 1, wherein the wiring block (12) is a T shape body having a plurality of guide slots (122) on the side surface of the perpendicular block (121), a positioning slot (124) arranged at the bottom of the flat block (123) in front of the T shape body, and the latch points (125) furnished on the both sides of the T shape body.

[c7]

7. A high definition multimedia interface (HDMI) connector as claimed in claim 6, wherein the number and the position of the guide slots (122) are in correspondence with the terminal receptacle slots (131).

[c8]

8. A high definition multimedia interface (HDMI) connector as claimed in claim 6, wherein the positioning slot (124) and the positioning pole (142) on the topside of the rectangular body are engaged to form a retaining means.

[c9]

9. A high definition multimedia interface (HDMI) connector as claimed in claim 6, wherein the latch points (125) are furnished on the both sides of the T shape body latch with the hollowed stop slots (151) on the stop plate (15) of the rectangular body to form a retaining means.

[c10]

10. A high definition multimedia interface (HDMI) connector as claimed in claim 1, wherein the front and rear portions and the configuration of the metallic front shell (21) are similar to the insertion portion (11) of the insulated housing assembly 10 for accommodating the insertion portion (11) therein, and a plurality of latch slots (211) and protrusions (212) are furnished on the long side surface of the rectangular body of the metallic front shell (21).

[c11]

11. A high definition multimedia interface (HDMI) connector as claimed in claim 10, wherein the latch slots (211) are engaged with the latch lugs (141) of the retainer (14) of the insulated housing assembly (10), and the protrusions (212) are engaged with the latch holes (221) on the metallic rear shell (22).

[c12]

12. A high definition multimedia interface (HDMI) connector as claimed in claim 1, wherein the metallic rear shell (22) is a rectangular body having a hollow front portion and a hollow cylinder at rear part with a sufficient space to receive the cablings, and the latch holes (221) are furnished at the front end of both top and bottom wide surface, the slanting inward projections (222) are furnished at both sides of the narrow surface.

[c13]

13. A high definition multimedia interface (HDMI) connector as claimed in claim 12, wherein the positions of the latch holes (221) and the protrusions (212) on the metallic front shell (21) are correspondingly matched to form a retaining means.

[c14]

14. A high definition multimedia interface (HDMI) connector as claimed in claim 12, wherein the slanting inward projection (222) is engaged in the rectangular end side of the received metallic front shell (21) to prevent the front and metallic rear shell (21), (22) from further longitudinal displacement.

[c15]

15. A high definition multimedia interface (HDMI) connector as claimed in claim 1, wherein the plastic outer shell (30) is adapted to receive the metallic rear shell (22) containing the metallic front shell (21) for firmly covering the both, and a plurality of notches (31) are furnished on the front end of the top and bottom sides of the plastic outer shell (30).

[c16]

16. A high definition multimedia interface (HDMI) connector as claimed in claim 1, wherein the front cover (40) has an opening similar to the insertion portion (11) and metallic front shell (21), so it may confine the rear part of the metallic front shell (21) and retain the metallic front shell (21) at the rectangular part of the

same, and a plurality of buckles (41) are furnished on the top and bottom sides of the frame of the front cover (40).

[c17]

17. A high definition multimedia interface (HDMI) connector as claimed in claim 1, wherein the number and position of the notches (31) and the buckle (41) on the front cover (40) are correspondingly matched to form a retaining means.